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| PRE-APPEAL BRIEF REQUEST FOR REVIEW | | Docket Number (Optional) <div style="text-align: center;">062092</div> | |
| | Application Number <div style="text-align: center;">10/568,075-Conf. #7448</div> | Filed <div style="text-align: center;">February 13, 2006</div> | |
| | First Named Inventor <div style="text-align: center;">Masaharu Yamamoto et al.</div> | | |
| | Art Unit <div style="text-align: center;">2818</div> | Examiner <div style="text-align: center;">J. Han</div> | |
| <p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p> <p>I am the</p> <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 55%;"> <p><input type="checkbox"/> applicant /inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>48,075</u></p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34. _____</p> </div> <div style="width: 40%; text-align: center;"> <p>_____ /Sadao Kinashi/ Signature</p> <p>_____ Sadao Kinashi Typed or printed name</p> <p>_____ (202) 822-1100 Telephone number</p> <p>_____ June 2, 2010 Date</p> </div> </div> <p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p> | | | |
| <input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted. | | | |

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of: **Masaharu Yamamoto et al.**

Art Unit: **2818**

Application Number: **10/568,075**

Examiner: **J. Han**

Filed: **February 13, 2006**

Confirmation Number: **7448**

For: **HERMETIC SEALING CAP, METHOD OF MANUFACTURING HERMETIC
SEALING CAP AND ELECTRONIC COMPONENT STORAGE PACKAGE**

Attorney Docket Number: **062092**

Customer Number: **38834**

PRE-APPEAL BRIEF REQUEST FOR REVIEW

Mail Stop: AF

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

June 2, 2010

Dear Sir:

This Request is filed concurrent with a Notice of Appeal in compliance with 37 C.F.R.

§41.31. Applicants request review of the final rejection in the above-identified application. No amendments are being filed with this request.

Claims 1-20 are currently pending. Of these pending claims 1-20 are rejected and from the basis for this Pre-Appeal Brief Request for Review.

Claims 1-3, 5-10, 12-14, and 16-20 were rejected under 35 U.S.C. 103(a) as being obvious over Levine (U.S. Patent No. 4,666,796) in view of Kim et al. (U.S. Publication No. 2003/0104651 A1) and Suzuki (Japanese Publication No. 2005-123297A).

Claims 4 and 15 were rejected under 35 U.S.C. 103(a) as being obvious over Levine in view of Kim et al. and Suzuki and further in view of Woolhouse et al. (U.S. Patent No. 4,236,296).

Claim 11 was rejected under 35 U.S.C. 103(a) as being obvious over Levine in view of Kim et al. and Suzuki and further in view of Shiomi et al. (U.S. Publication No. 2004/0023487).

The issue presented is whether Suzuki discloses a first layer containing “a diffusion accelerator.” Suzuki does not disclose the utilization of a diffusion accelerator.

Suzuki describes as follows:

[0034]

In the wiring board of this invention, the **nickel-cobalt layer 10 is formed directly under the gold layer 11**. Since **a cobalt component inhibits diffusion of nickel components**, part of nickel in the nickel layer 9 or the nickel-cobalt layer 10 is neither diffused into the inside of the gold layer 11, nor exposed to be oxidized on the surface of the gold layer 11. Thus, a nickel oxide or a nickel hydroxide having bad wettability with respect to the solder material 8 is hardly generated, whereby bonding the metallized layer 6 for sealing and the solder material 8 becomes strengthened, and bonding the metallized layer 6 for sealing and the metal lid body 2 through the solder material 8 reliably becomes further strengthened.

(Suzuki, paragraph [0034]). Because of the difference in the function of the layers the order of the layers is also different. According to Suzuki, when the gold layer is the solder layer, the order of the layers is Ni/ Ni-Co/Au. In contrast, according to claim 1, when the diffusion accelerator is Co, the order of the layers is Ni-Co/Ni/solder layer. Thus, the order of the layers is different between Suzuki and the present invention. Therefore, even the teaching of Suzuki is combined with Levine, there is no reason that the hermetic sealing cap structure recited in claim 1 is obtained.

The Examiner alleged in the Advisory Action as follows:

Applicant argued that Suzuki does not disclose the utilization of a diffusion accelerator as cobalt inhibits diffusion of nickel components based on applicant’s translation. However, accelerators are not limited to speeding up a reaction. An accelerator changes the speed of the reaction, whether slower or faster. Acceleration is a change in the speed, not an increase, therefore, cobalt’s control of the diffusion rate constitutes a diffusion accelerator.

(Advisory Action, continuation sheet). However, the Examiner's allegation ignores ordinary meaning and the consistent use of the word "accelerator" in the present specification.

According to the present invention, the first layer can be easily diffused into the solder layer through the second layer when the solder layer bonds to the electronic component storing member at the second temperature higher than the first temperature as compared with a case where the second layer is not directly in contact with the surface of the first layer. This is not expected from Levine and Suzuki.

Also, Kim et al. simply describes Sn as an example of the materials to form a solder layer of a particular lid frame.

Therefore, even if Levine is combined with Suzuki and Kim et al., there is no reason to make a sealing cap comprising "a substrate; a first layer, formed on the surface of said substrate, mainly composed of Ni containing a diffusion accelerator; a second layer formed **to be in contact with** the surface of said first layer; and a solder layer mainly composed of Sn formed on a region of the surface of said second layer to which said electronic component storing member is bonded, wherein said second layer **is formed so as to inhibit** said first layer from diffusing into said solder layer at a first temperature **and diffuse** said first layer into said solder layer through said second layer when said solder layer bonds to said electronic component storing member at a second temperature higher than said first temperature."

For at least these reasons, claim 1 patentably distinguishes over Levine, Suzuki and Kim et al.

For the substantially same reasons, independent claims 10 also patentably distinguish over Levine, Suzuki and Kim et al.

Similarly, regarding claim 12, none of Levin, Kim et al. and Suzuki discloses or suggests, among other things, “preparing a substrate; forming a first layer mainly composed of Ni containing a diffusion accelerator on the surface of said substrate; forming a second layer on the surface of said first layer; and forming a solder layer mainly composed of Sn at a first temperature on a region of the surface of said second layer to which said electronic component storing member is bonded with the second layer inhibiting said first layer from diffusing into said solder layer at the first temperature,” For at least these reasons, claim 12 patentably distinguishes over Levine, Suzuki and Kim et al.

Because independent claims 1, 10 and 12 are patentably distinguish over the prior art, dependent claims also patentably distinguish over the prior art.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
Westerman, Hattori, Daniels & Adrian, LLP

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